

In re: Park et al.
Serial No.: 10/780,067
Filed: February 17, 2004
Page 4

BEST AVAILABLE COPY

Amendments to the Drawings:

The attached drawings sheets illustrate changes to Figures 4A-4C, 10, 15A-15C, 22, 28, 32 and 33, as requested by the Examiner. Applicants will submit formal replacement drawing sheets shortly hereafter.

Attachments: Annotated Sheets Showing Changes

In re: Park et al.
Serial No.: 10/780,067
Filed: February 17, 2004
Page 11

REMARKS

Applicants appreciate the thorough examination of the present application as evidenced by the Official Action of March 1, 2006 (hereinafter "Office Action"). In particular, Applicants appreciate the Examiner's indication that Claims 31-48 are allowed, and that Claims 3-5, 7, 8, 11, 14 and 16-18 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In response, Applicants have amended independent Claims 1 and 13 to include the recitations of Claims 3 and 16, respectively. Accordingly, Claims 3 and 16 have been canceled, Claims 4-5 have been amended to depend from Claim 1, and Claims 17-18 have been amended to depend from Claim 13. Applicants wish to note that these amendments have been made to expedite prosecution and subsequent allowance of this application, and as such, are not to be construed as an admission of the unpatentability of the subject matter recited therein. As such, Applicants submit that Claims 1 and 13 are now in condition for allowance. Also, as Claims 2, 4, 5 and 7-12 depend from Claim 1, and as Claims 14, 15, 17, 18 and 20 depend from Claim 13, Applicants submit that these claims are also allowable at least per the allowability of Claims 1 and 13.

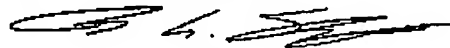
In addition, Applicants have amended Figures 4A-4C, 10, 15A-15C, 22, 28, 32 and 33 to respectively illustrate the source/drain region junction (shown by the dashed line) with the insulating layer and the gate electrode extending therebeyond, as requested by the Examiner. The specification has also been amended to note that the source/drain region junction is denoted by the dashed line. Applicants respectfully submit that these proposed changes do not add new matter, as the specification and claims as originally filed describe the source/drain region junctions. For example, the discussion of Figure 4A in the specification notes that "the gate electrode 66 extends toward the substrate 50 to beyond the junction boundaries of the source and drain regions". *See* Specification, Page 7, lines 14-15. Also, the Summary of the invention describes "an insulating layer extending on a side wall of the vertical channel toward the substrate to beyond the source/drain region junction". *See* Specification, Page 3, lines 18-19. As such, Applicants provide herewith marked-up copies of Figures 4A-4C, 10, 15A-15C, 22, 28, 32 and 33 illustrating the source/drain region junctions, respectively labeled as "Annotated Sheet". Replacement drawing sheets reflecting

In re: Park et al.
Serial No.: 10/780,067
Filed: February 17, 2004
Page 12

these amendments will be submitted shortly hereafter, to comply with the requirements of 37 CFR 1.84(c) and 37 CFR 1.121(d). Thus, Applicants respectfully request approval of the proposed changes to Figures 4A-4C, 10, 15A-15C, 22, 28, 32 and 33 and withdrawal of the objections to the drawings.

Accordingly, based on the above amendments, Applicants submit that the present application is in condition for allowance. Therefore, Applicants respectfully request allowance of the pending claims and passing the application to issue. Applicants encourage the Examiner to contact the undersigned by telephone to resolve any remaining issues.

Respectfully submitted,

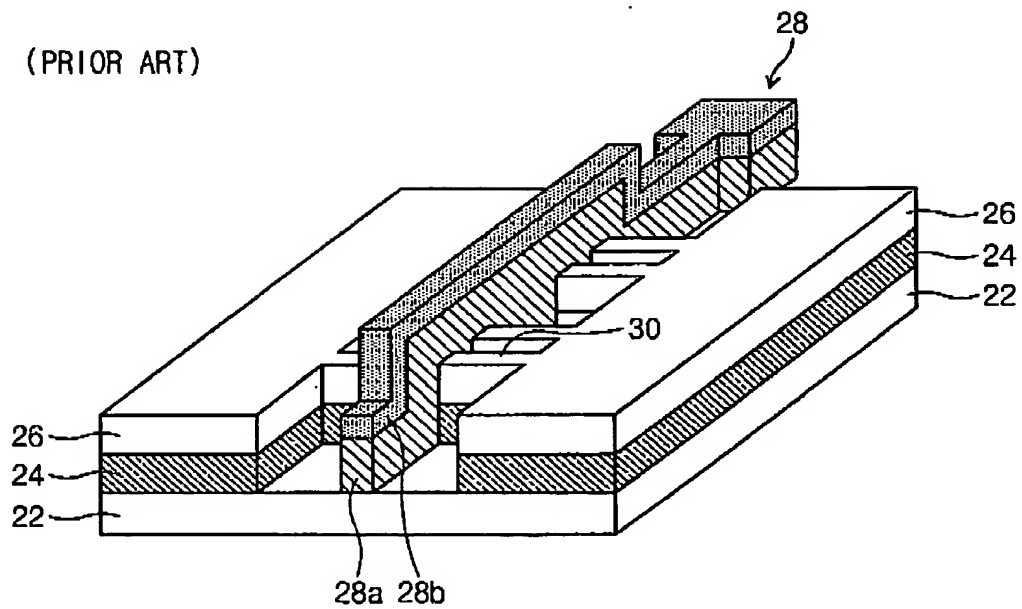
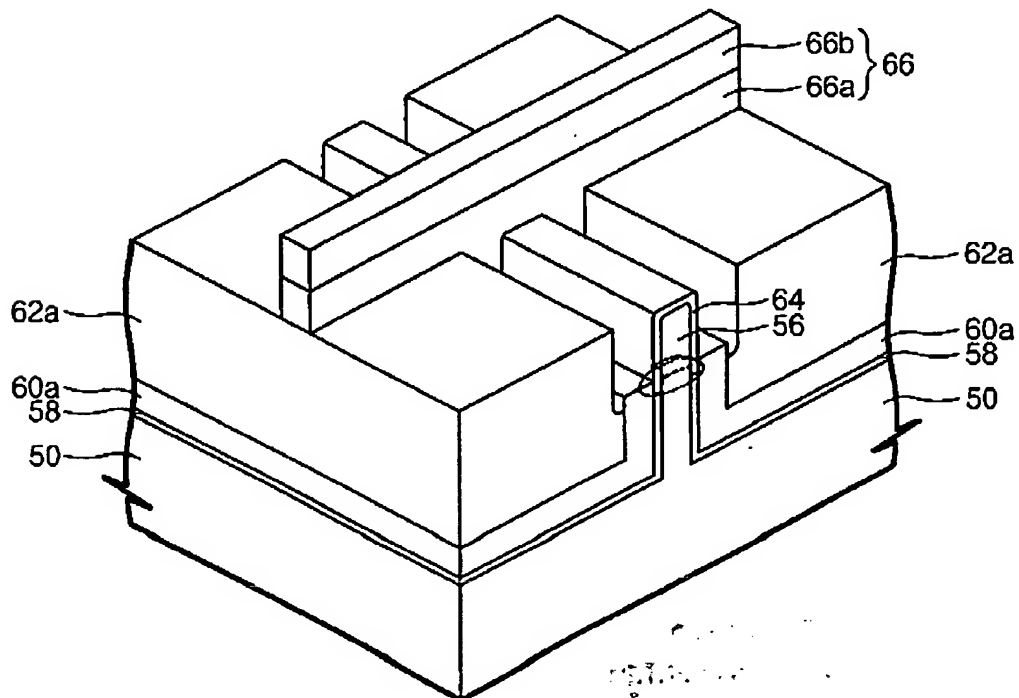


Rohan G. Sabapathypillai
Registration No. 51,074

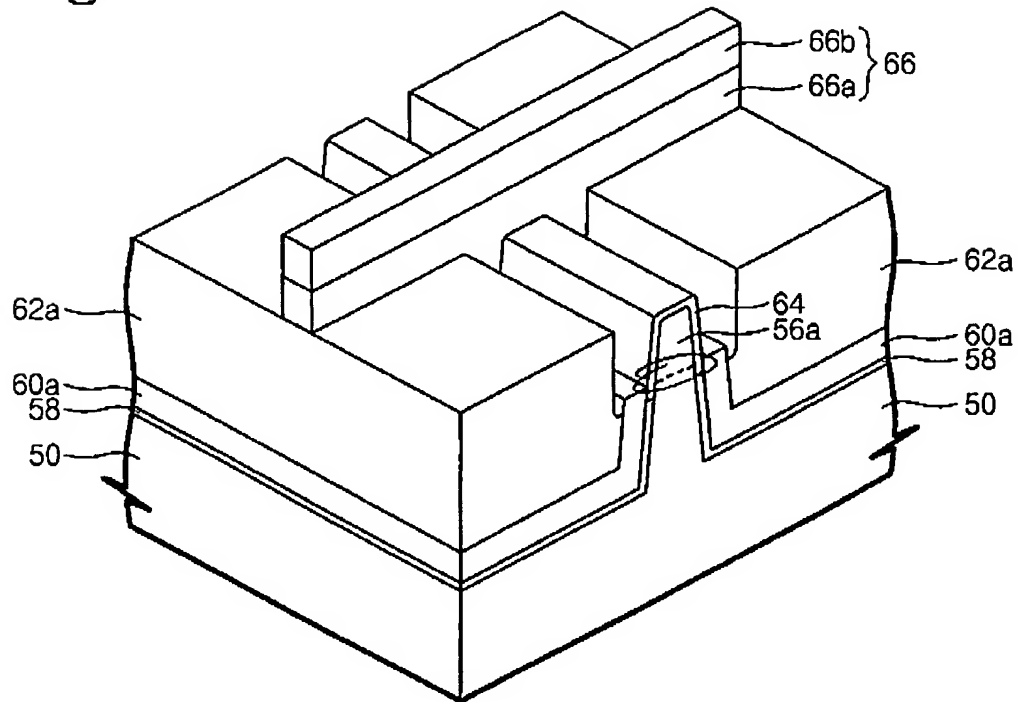
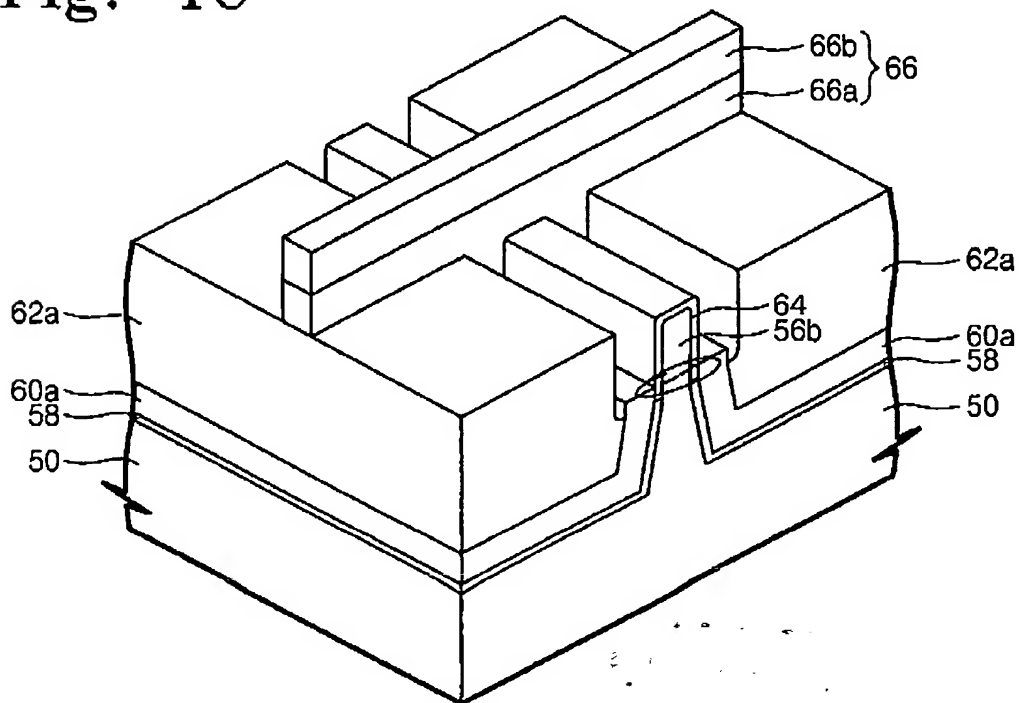
Myers Bigel Sibley & Sajovec, P.A.
P. O. Box 37428
Raleigh, North Carolina 27627
Telephone: (919) 854-1400
Facsimile: (919) 854-1401
Customer Number 20792

Fig. 3

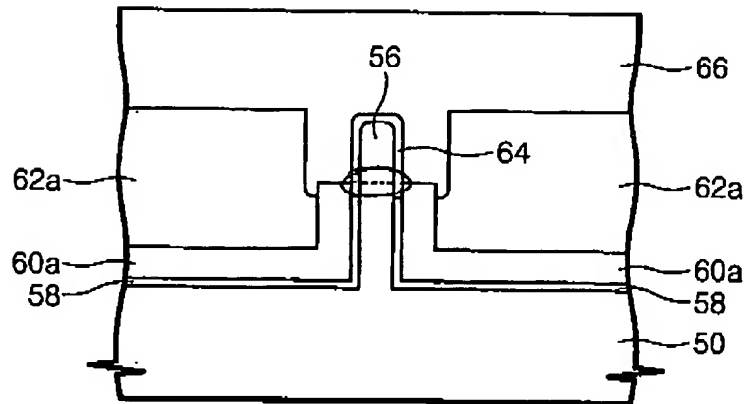
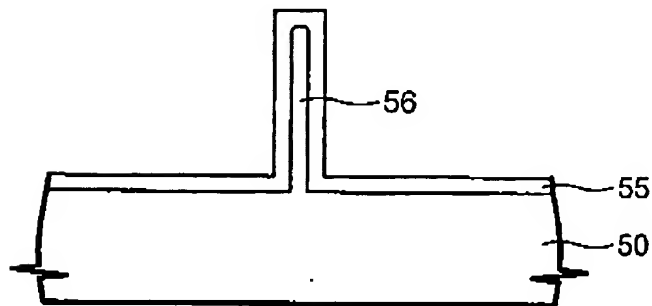
(PRIOR ART)

**Fig. 4A**

3/20

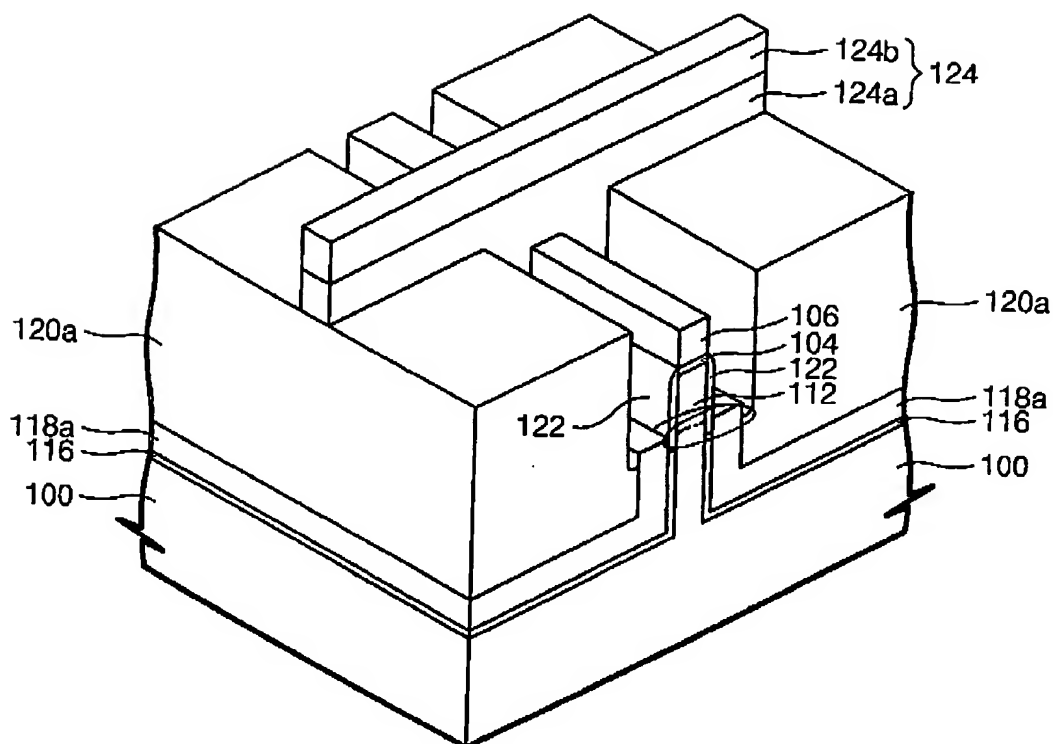
Fig. 4B**Fig. 4C**

7/20

Fig. 10**Fig. 11****Fig. 12**

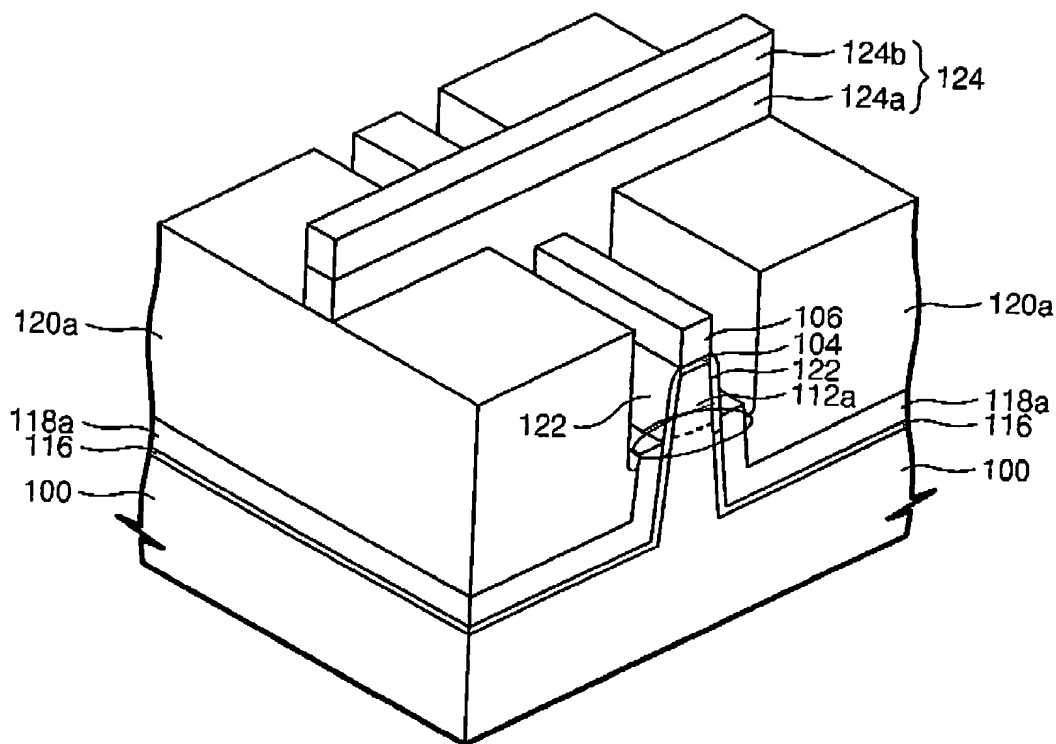
Annotated Sheet

9/20

Fig. 15A

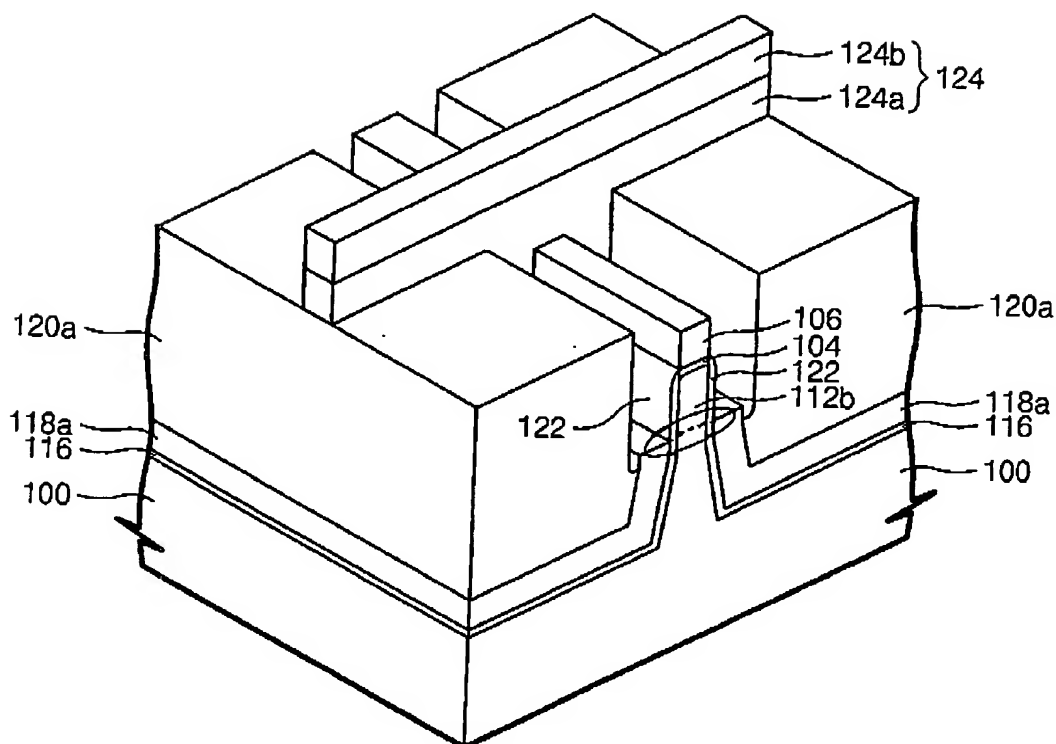
Annotated Sheet

10/20

Fig. 15B

Annotated Sheet

11/20

Fig. 15C

14/20

Fig. 21

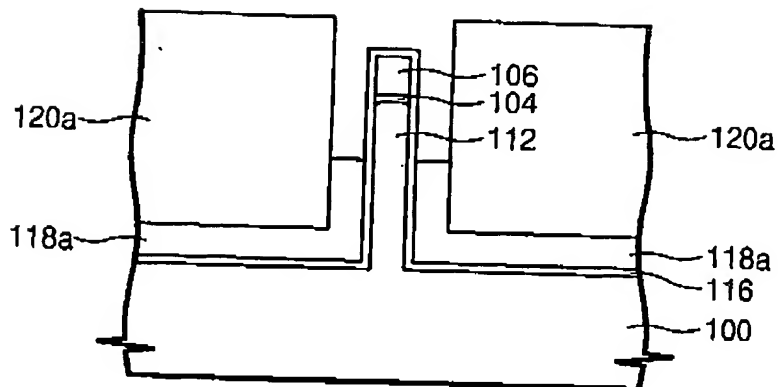
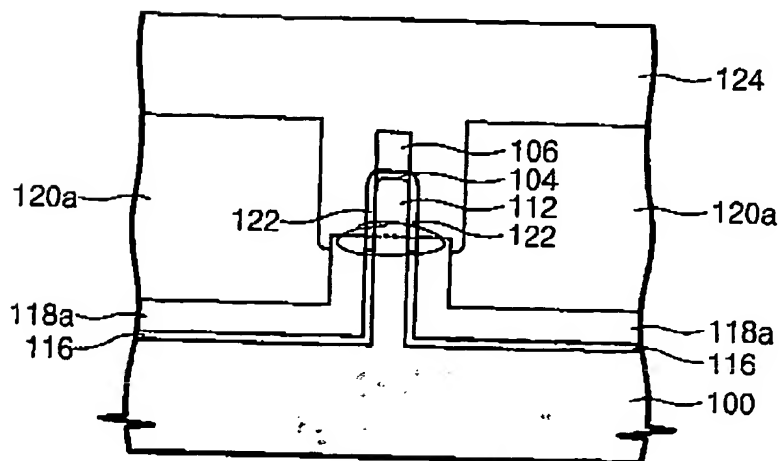
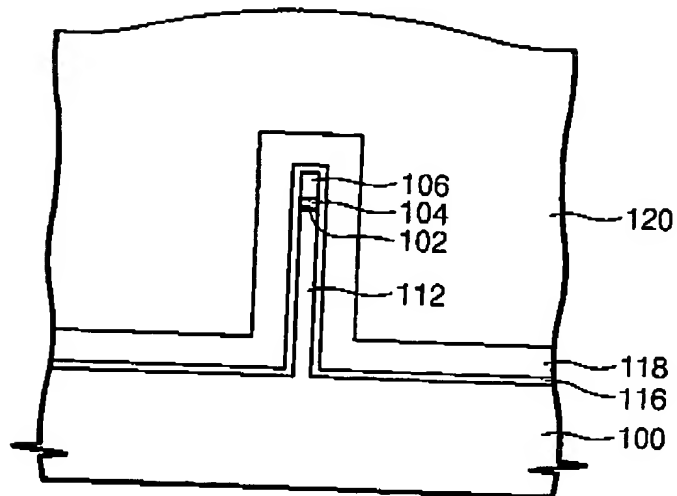
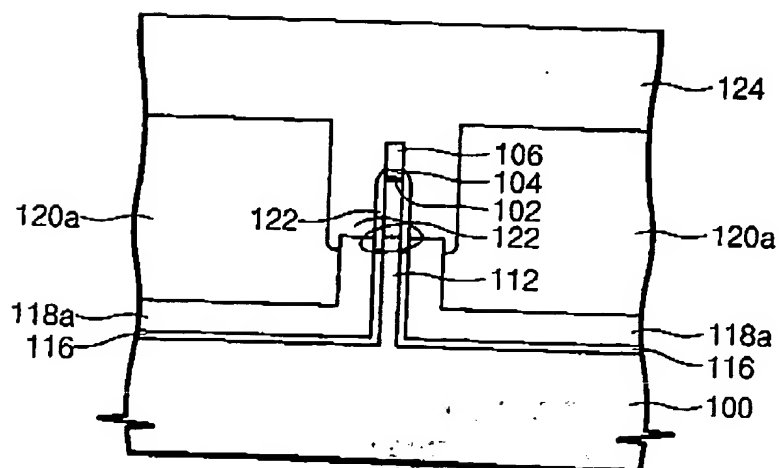


Fig. 22



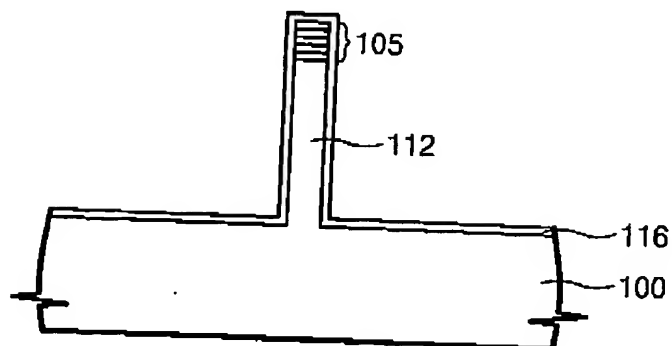
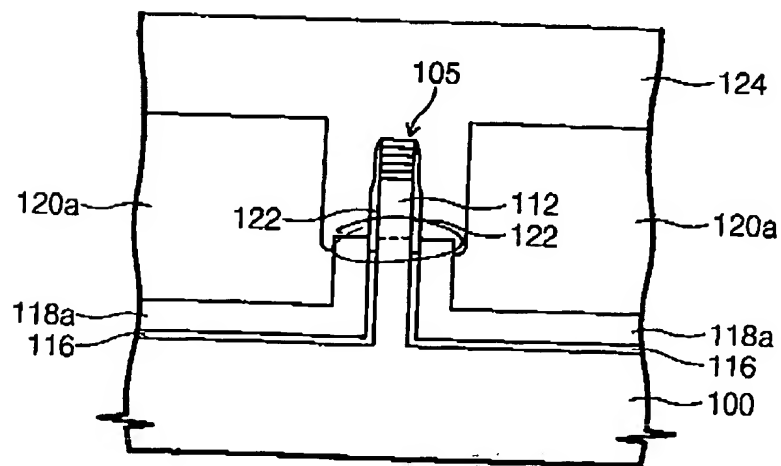
Annotated Sheet

17/20

Fig. 27**Fig. 28**

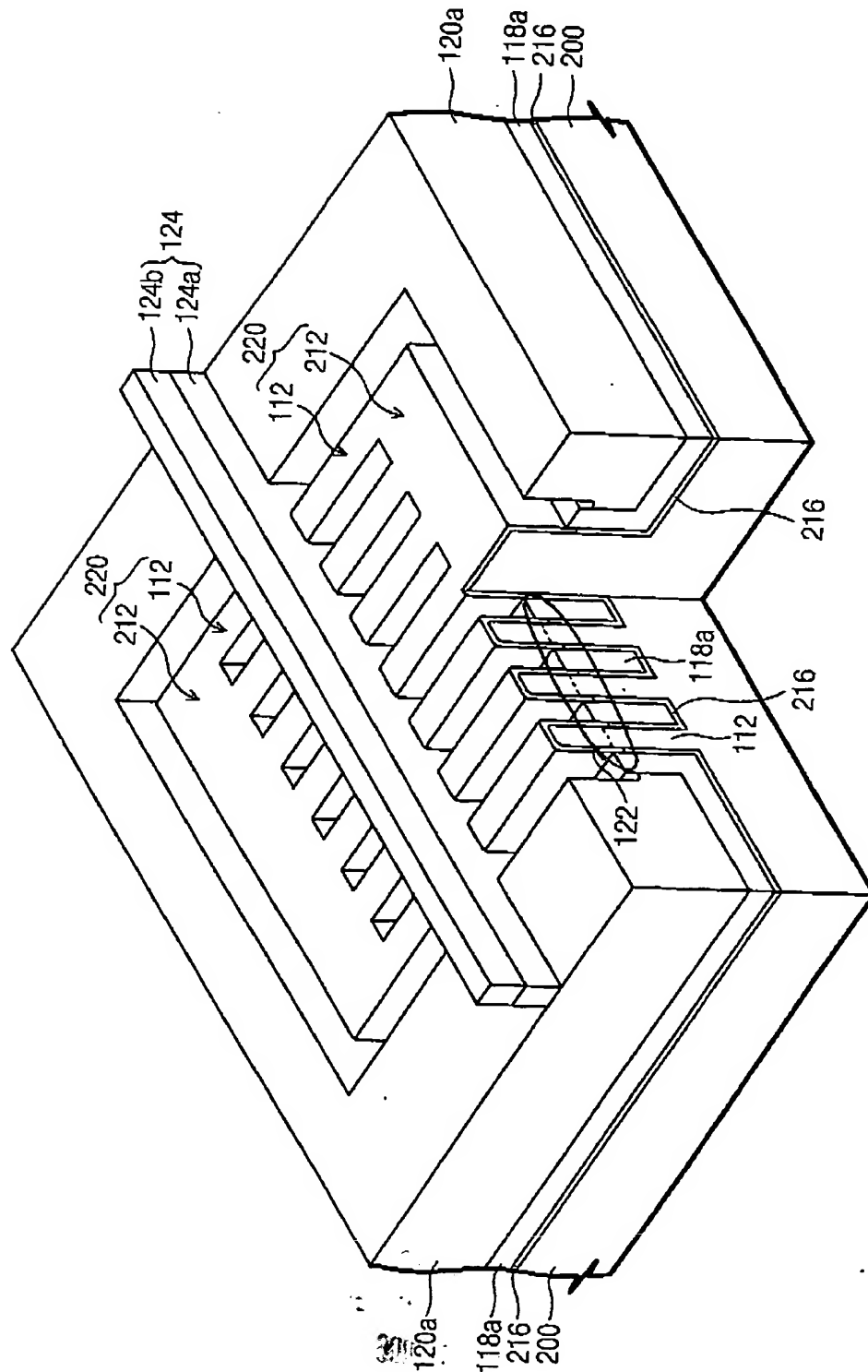
Annotated Sheet

19/20

Fig. 31**Fig. 32**

Annotated Sheet

Fig. 33



**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☒ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER: _____**

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.